



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

mf

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,899	02/02/2000	Hiroyuki Suzuki	032817-002	5436

21839 7590 11/01/2006

BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

NGUYEN, MADELEINE ANH VINH

ART UNIT	PAPER NUMBER
----------	--------------

2625

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/495,899

Applicant(s)

SUZUKI ET AL.

Examiner

Madeleine AV Nguyen

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 13-19 and 22 is/are allowed.
- 6) ☒ Claim(s) 7-9, 11, 12, 20, 21 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to amendment filed on October 05, 2006.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7-9, 11, 12, 20, 21, 23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirota et al (US Patent No. 5,867,285).

Concerning claim 7, Hirota et al discloses an image processing apparatus (Fig.3-4) comprising a sensor (Fig.2A) disposed linearly in a primary scanning direction, the sensor reading an image that has been decomposed into plural colors; an optical system (30, Fig.1) for projecting light from the image onto the sensor; and a correction portion (146, Fig.3B, Fig.4A) for correcting a phase shift among the color in the primary scanning direction due to a chromatic aberration of the optical system, the correction portion performing a phase shift correction for each of plural areas divided in the primary scanning direction (Abstract; col. 1, line 58 – col. 2, line 9; col. 5, line 61 – col. 7, line 13).

Concerning claim 8-9, Hirota further teaches that the sensor includes line sensors for red, green and blue colors arranged by a predetermined pitch in a secondary scanning direction (Fig.2A); a predetermined test image is read according to characteristic of a machine coupled to

Art Unit: 2625

the image processing apparatus (38, Fig.1; col. 4, lines 19-20) and wherein information for the correction for each area is obtained from the image data (col. 5, lines 35-40; col. 5, line 61 – col. 7, line 13).

Concerning claim 11, Hirota discloses an image processing (Figs.1, 3, 4) for performing a correction process of image data of plural colors obtained by an image sensor having a structure in which a plurality of element arrays are arranged longitudinally in a primary scanning direction in parallel and separated by a predetermined pitch in a secondary scanning direction (Fig.2), the apparatus comprising a plurality of interline correction portions (146, Fig. 3B, Fig. 4A), for correcting a phase shift generated due to position shift among the element arrays of the image sensor in the secondary scanning direction, each interline correction portion using one of the plural colors (R, G, B) as a reference color for correction portion and each of the interline correction portions produces plural sets of image data (Fig.4A); and a correction output portion (150) for outputting image data corrected in accordance with image data output by the plural interline correction portions (col. 1, line 58 – col. 2, line 12; col. 5, line 35 – col. 7, line 13).

Concerning claim 12, Hirota discloses an image processing apparatus as discussed in claim 11 above wherein the correction output portion for outputting an average of image data for each color output by the plural interline portions, as corrected image data (Fig. 4B; col. 8, lines 20-24).

Concerning claims 20-21, 23 and 25, Hirota further teaches that each of the interline correction portions produces image data for each color; wherein the correction output portion averages the output image data for each color (Fig. 4B; col. 8, lines 20-24); each of the interline

Art Unit: 2625

correction portions corrects a phase shift which is less than one line (col. 6, line 26 – col. 7, line 13).

Allowable Subject Matter

3. Claims 1-5, 13-19, 22 are allowed.

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is an Examiner's Statement of Reasons for Allowance:

a. Claims 1-5, 22 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches an image processing apparatus comprising a fractional correction portion for correcting the data output time difference due to the position difference between first and second sensors by an amount corresponding to less than one line unit wherein the fractional correction portion is disable if a black fine line has been detected by a black fine line detection portion.

Claims 13-19 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches an image processing apparatus comprising a density correction portion for performing correction by increasing a density of image data of at least one wavelength component among image data of plural wavelength components that constitute a present pixel when the present pixel is on a fine line on the basis of a signal from a fine line

Art Unit: 2625

decision portion so as to reduce a difference between densities of image data of the plural wavelength components that constitute the present pixel.

Claim 10 is allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches an image processing apparatus as claimed in claim 9 wherein correction coefficients for the areas are obtained as information for correction for each area in accordance with a distribution of the position shift among the barycenters of the red, green and blue image data in the primary scanning direction.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Funada (US Patent No. 5,457,548) discloses a color image processing apparatus capable of correcting for color aberration owing to various causes.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

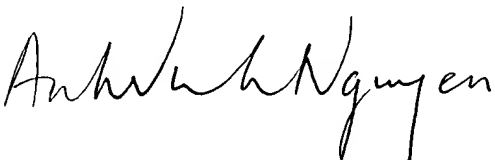
Art Unit: 2625

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeleine AV Nguyen whose telephone number is 571 272-7466. The examiner can normally be reached on Tuesday-Thursday 12:30-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Madeleine AV Nguyen
Primary Examiner
Art Unit 2625

October 25, 2006